Algebraic Format Rules
By Nick

Rule #1

Show each step in solving the equation. The solving action is clearly written under each equation. The result is your next equation line.

Example: $6x - 4 = 8$

Step 1 (the solving action): $+4 \quad +4$

Step 2 (the result): $6x = 12$

Step 3 (the solving action): $\div 6 \quad \div 6$

Step 4 (the result & solution): $x = 2$

Rule #2

Write in a vertical arrangement so that your solution is the last line.

Example:

$$\frac{1}{2}a + 25 = 50$$
$$\underline{\quad - 25 \quad - 25}$$
$$\frac{1}{2}a = 25$$
$$\underline{\times 2 \quad \times 2}$$
$$a = 50$$

solution

Rule #3

Equal signs must be lined up.

Example:

$$30 - z = 69$$
$$\underline{-30 \qquad -30}$$
$$-z = 39$$
$$\underline{\times -1 \quad \times -1}$$
$$z = -39$$

Rule #4

Balance your equation! Whatever you do to one side of the equation you must do to the other side.

Example: $-3x - 3 = 6$

$\underline{+3 \quad +3}$

$-3x = 9$

$\underline{\div -3 \div -3}$

$x = -3$

Rule #5

The solution must be written with the variable on the left of the equal sign.

Example:

$$4x + 4 = 14 - x$$

$$\underline{-4 \quad\quad -4}$$

$$4x = 10 - x$$

$$\underline{+x \quad\quad\quad +x}$$

$$5x = 10$$

$$\underline{\div 5 \quad \div 5}$$

$$x = 2$$

Rule #6

You must show a check! Substitute your solution to show it works. Your answer will all ways be correct if the check works. Use ☑

Example: **¼ n + 20 = 24**

☑   **- 20   - 20**

¼n =   4

× 4   × 4

n = 16

Check: (¼)(16) + 20 = 24

4 + 20 = 24

24 = 24 ☑

Rule #7

Write neatly!